REMARKS

The Office Action of September 30, 2003 has been received and its contents carefully considered.

The Examiner states that claims 1, 2, 4-9, 11 and 13 are all the claims pending in the application. Applicants point, however, that claim 12 is pending and subject to examination in the present application, and that claim 10 is pending but has been withdrawn from examination.

Claims 5-9 have been rejected under the first paragraph of 35 U.S.C. § 112 as failing to comply with the written description requirement.

The Examiner states that the claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one of ordinary skill in the art that the inventors, at the time the application was filed, had possession of the claimed invention.

In particular, the Examiner asserts that the invention as originally filed fails to disclose that X^{61} represents an oxygen atom, a sulfur atom, a selenium atom, a nitrogen atom or a carbon atom, and that X^{62} represents an oxygen atom, a sulfur atom, a selenium atom, a tellurium atom, a nitrogen atom or a carbon atom.

The Examiner asserts that the exclusion of tellurium from the definition of X^{61} creates a new concept and raises the issue of new matter.

Applicants first point out that as has been set forth in court decisions, the new matter section of the statute, 35 U.S.C. § 132, should not be used to reject amendments to claims or claims added after the original filing of the application. The proper statutory basis for raising an

objection to amendments to claims is the first paragraph of Section 112. *In re Rasmussen*, 650 F.2d 1212, 211 USPQ 323 (CCPA 1981).

By amending claim 5 to delete tellurium from the definition of X^{61}, applicants have claimed less than they originally disclosed. Applicants submit that the case law clearly permits an applicant to amend the claims to delete from the claims subject matter that was originally disclosed. See, *In re Johnson*, 194 USPQ 187, 196 (CCPA 1977), where the court held that there is a sufficient written description where claims are amended to delete a disclosed species.

> The notion that one who fully discloses, and teaches those skilled in the art how to make and use, a genus and numerous species therewithin, has somehow failed to disclose, and teach those skilled in the art how to make and use, that genus minus two of those species, and has thus failed to satisfy the requirements of §112, first paragraph, appears to result from a hypertechnical application of legalistic prose relating to that provision of the statute. All that happened here is that appellants narrowed their claims to avoid having them read on a lost interference count.

See also, *In re Driscoll*, 195 USPQ 434 (CCPA 1977).

Accordingly, applicants submit that the Examiner's rejection is without merit and request its withdrawal.

Claims 4 and 13 have been rejected under the second paragraph of 35 U.S.C. § 112 as indefinite.

The Examiner points out that the term "Y^{52}" in claims 11 and 13 is indefinite since the compound of formula (XX) does not contain "Y^{52}".

In the Amendment that was filed on July 15, 2003, "Y^{52}" was inadvertently omitted from formula (XX). Accordingly, applicants have amended claims 4 and 13 to insert the correct formula for formula (XX) which contains "Y^{52}".

Claims 1, 2, 4 and 5 have been rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over the newly cited U.S. Patent 5,057,406 to Usagawa et al.

Applicants submit that Usagawa et al do not disclose or render obvious the subject matter of claims 1, 2, 4 and 5 and, accordingly, request withdrawal of this rejection.

The Examiner states that Usagawa et al disclose a compound which contains a furan group of formula (I) of claims 1 and 4 at column 35. Applicants believe the Examiner erroneously referred to column 35, and that he intended to refer to Compound (35) at columns 11 and 12 of Usagawa et al since the compounds at column 35 do not contain a furan group.

Compound (35) of Usagawa et al contains a furopyrrole group.

Applicants have amended the definition of Z in claim 1 so that the ring formed by Z in formula (I) is "an oxazole ring, a thiazole ring, a selenazole ring, an imidazole ring, a 2-pyridine ring or a 4-pyridine ring". This amendment is supported by the description on page 21, lines 5 to 7 of the present specification.

By this amendment, Compound (35) of Usagawa et al is not within the scope of the recitations of claim 1, since Compound (35) of Usagawa et al does not contain an oxazole ring, a thiazole ring, a selenazole ring, an imidazole ring, a 2-pyridine ring or a 4-pyridine ring. Further, none of the compounds at column 35 of Usagawa et al are within the scope of claim 1.

With respect to claim 2, applicants submit that Usagawa et al do not satisfy the recitations of claim 2. Claim 2 requires that Y be selected from Y-1 to Y-26 of claim 2. Applicants submit that there is no disclosure in Usagawa et al of compounds that satisfy Y-1 to Y-26 of claim 2. The Examiner has not identified any compound in Usagawa et al that satisfies the recitations of claim 2.

With respect to claim 4, applicants have amended claim 4 to delete a carbon atom from the definition of X^{51} and X^{52}. Compound (35) of Usagawa et al does not satisfy formula (XX) of amended claim 4, since Compound (35) contains a carbon atom in a position corresponding to X^{51} and X^{52}.

With respect to claim 5, the Examiner relies on Compounds (31) to (34) of Usagawa et al at columns 11 and 12.

Applicants disagree with the Examiner that Compounds (31) to (34) of Usagawa et al satisfy the recitations of formula (XXX) of claim 5. In particular, claim 5 requires that the thiophene ring be substituted with at least one halogen atom. The Compounds (31) to (34) of Usagawa et al do not contain a halogen atom on the thiophene ring. In addition, n^{61} in the formula (XXX) of claim 5 represents 0 or 1, whereas Compounds (31) to (35) of Usagawa et al correspond to the case where n^{61} represents 3.

In view of the above, applicants submit that Usagawa et al do not disclose or render obvious the subject matter of claims 1, 2, 4 and 5 and, accordingly, request withdrawal of this rejection.

Claims 5-9 have been rejected under 35 U.S.C. § 103(a) as obvious over either JP '250 or JP '950 in view of either the newly cited patent to Parton et al or the newly cited patent to Hioki et al.

In essence, the Examiner recognizes that JP '250 and JP '950 do not disclose a compound in which a nucleus connected to the thiophene ring contains an oxygen atom, a sulfur atom, a selenium atom, a nitrogen atom or a carbon atom. The compounds in JP '250 and JP '950, instead, contain a nucleus that contains a tellurium atom connected to a thiophene ring.

The Examiner argues, however, that it is known that the tellurium atom disclosed in JP '250 and JP '950 is equivalent or analogous to an oxygen atom, a sulfur atom, a selenium atom, a nitrogen atom or a carbon atom. In support of this assertion, the Examiner refers to Parton et al in column 2, lines 45-68 to column 3, lines 1-34 and Hioki et al at column 13, lines 11-68.

Applicants disagree with this rejection.

The Hioki et al patent, at column 13, lines 11-68, discloses various nucleus formed by Z_{11} to Z_{16}. None of these nucleus contains a thiophene ring condensed with a five-membered nitrogen containing ring. Accordingly, applicants submit that the teachings of Hioki et al are not relevant to the present claims.

Similarly, the Parton et al patent, at column 2, lines 45-68 to column 3, lines 1-34, discloses various nucleus, including a thiazole nucleus, an oxazole nucleus, a selenazole nucleus, a pyridine nucleus, a tellurazole nucleus, or a quinoline nucleus. None of these nuclei is condensed with a thiophene ring as required by claim 5. Accordingly, applicants submit that one

of ordinary skill in the art would not be led to the subject matter of claims 5 to 9 from the cited prior art.

In view of the above, applicants submit that claims 5 to 9 are patentable over the cited references and, accordingly, request withdrawal of this rejection.

Claims 11-13 have been rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over JP '950.

The Examiner asserts that JP '950, at page 577, discloses Compound 112 that contains a pyrrole group and, therefore, anticipates claims 11-13.

Thus, the Examiner has not accepted applicants' argument that the structure shown for Compound 112 contains a mistake, and that Compound 112, in fact, does not contain a pyrrole ring.

In response, applicants point out that in a pyrrole ring, a hydrogen atom (H) or a substituent binds to the nitrogen atom (N) in the ring, as shown in the attached page 1274 from The Merck Index. In Compound 112 of JP '950, there is no hydrogen atom (H) or a substitutent that binds to the nitrogen atom (N), and thus Compound 112 cannot be considered as containing a pyrrole ring. Further, "Compound" 112 of JP '950 is not composed as a compound, since the structure shown is not a complete structure of a compound. There may be a possibility of omission of a hydrogen atom, a possibility that the nitrogen atom is a mistake and instead should be a sulfur atom, and so on. It is considered that there may be many kinds of possibilities. In any case, JP '950 does not disclose the present invention of claims 11 to 13.

Applicants note that they have amended claim 12 to add that Z in formula (I) can represent a 2-pyridine ring. Support for this amendment can be found at page 21, line 5. Compound 112 of JP '950 is not within the scope of claim 12 since Compound 112 does not contain an oxazole ring, a selenazole ring, an imidazole ring, a 2-pyridine ring or a 4-pyridine ring.

In addition, applicants have amended claim 13 to delete tellurium from the definition of X^{51} and X^{52}. Compound 112 of JP '950 clearly is not within the scope of claim 13 since Compound 112 contains a tellurium atom.

In view of the above, applicants submit that JP '950 does not disclose or render obvious the subject matter of claims 11 to 13 and, accordingly, request withdrawal of this rejection.

Claims 5-9 have been rejected under 35 U.S.C. § 102(a) as anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as obvious over P2000-63690.

In essence, the Examiner asserts that Compound D-38 in columns 35-36 satisfies the recitations of claim 5. The Examiner also refers to a number of other thiophene ring containing compounds that are disclosed in P '690, but which do not contain a chlorine atom.

In response, applicants point out that Compound D-35 of P '690 is a pentamethine dye and therefore is different from the compounds of claim 5 where n^{61} represents 0 or 1.

Accordingly, applicants submit that JP '690 does not disclose or render obvious the subject matter of claims 5 to 9 and, therefore, request withdrawal of this rejection.

In Paragraph 11 of the Office Action, entitled "Response to Arguments", the Examiner sets forth a number of comments on each of the above rejections. In general, the Examiner has

taken the position that if the dye(s) disclosed in the prior art does not anticipate the present claims, it would have been obvious to modify the dye or provide the dye with an improvement thereof, such as modifying the ring associated with the dye to provide the dye having a light absorption with a desired wavelength. The Examiner, however, does not refer to any prior art that suggests making the modifications necessary to arrive at the present claims and provides absolutely no reason why it would have been obvious to make any of the modifications necessary to arrive at the present claims.

If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

Sheldon I. Landsman

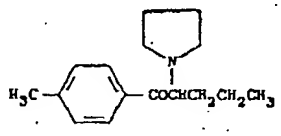
SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE
23373
CUSTOMER NUMBER

Sheldon I. Landsman
Registration No. 25,430

Date: March 30, 2004

NO; mol wt 245.35. C 78.32%, H 9.45%, N 5.71%, O 6.52%. Prepn: Brit. pats. 927,475 and 933,507 (both 1963 to Wander and to Thomae); Heffe, *Helv. Chim. Acta* 47, 1289 (1964). Pharmacology: Stille *et al., Arzneimittel-Forsch.* 13, 871 (1963). Metabolism: Michaelis *et al., J. Med. Chem.* 13, 497 (1970).



$bp_{0.08}$ 104°.

Hydrochloride. $C_{16}H_{24}ClNO$, *F 1983, Centroton, Thymergix.* Crystals from 2-butanone or from methanol + acetone + diethyl ether, mp 178°. LD_{50} orally in mice: 350 mg/kg. Stille *et al., loc. cit.*

THERAP CAT: Central stimulant.

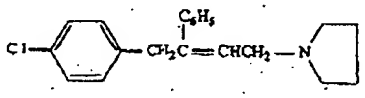
8022. **Pyroxylin.** *Cellulose nitrate; nitrocellulose;* collodion cotton; soluble gun cotton; collodion wool; colloxylin; xyloidin; celloidin; Parlodion. Variable mixture which consists chiefly of cellulose tetranitrate. *Review:* R. T. Bogan *et al.* in Kirk-Othmer *Encyclopedia of Chemical Technology* vol. 5 (Wiley-Interscience, New York, 3rd ed., 1979) pp 129-143.

Yellowish-white, matted mass of filaments, having the appearance of raw cotton. *Highly flammable;* pyroxlin with higher nitrogen content *may explode!* Flash pt 40°F (closed cup); ignites at 160-170°. When kept in well-closed containers and exposed to light it dec. Sol in 25 parts of a mixture of 1 vol alcohol and 3 vols ether; also sol in methanol, acetone, glacial acetic acid, amyl acetate. *Keep loosely packed in cartons and protected from light and moisture.* Can be shipped with safety only when wet with 25-30% water or alcohol.

USE: In manuf of collodions; in lacquer coatings, inks, adhesives. Cellulose hexanitrate is used in explosives and propellants. Celloidin is used for embedding sections in microscopy; in electrotechnics, photography, galvanoplasty.

THERAP CAT: Topical protectant.

8023. **Pyrrobutamine.** *1-[4-(4-Chlorophenyl)-3-phenyl-2-butenyl]pyrrolidine; 1-(γ-p-chlorobenzylcinnamyl)pyrrolidine;* 1-*p*-chlorophenyl-2-phenyl-4-pyrrolidyl-2-butene; Pyronil. $C_{20}H_{22}ClN$; mol wt 311.87. C 77.03%, H 7.11%, Cl 11.37%, N 4.49%. *Ref:* Lee *et al., Proc. Soc. Exp. Biol. Med.* 80, 458 (1952). Prepn: Mills, U.S. pat. 2,655,509 (1953 to Eli Lilly).



Oily liquid, $bp_{0.3}$ 190-195°. On standing gives crystals, mp 48-49°.

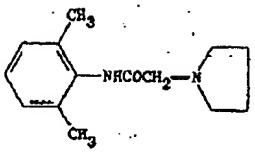
Diphosphate, $C_{20}H_{28}ClNO_8P_2$, crystals from alcohol + ether, mp 129.5-130°. Soluble in warm water to the extent of 10%. Soly in alcohol at 25° about 5%. Practically insol in chloroform, ether.

Hydrochloride, $C_{20}H_{22}ClN.HCl$, crystals from alcohol + ether, mp 227-228°.

Hydrobromide, $C_{20}H_{22}ClN.HBr$, crystals from alcohol + ether, mp 228-229°.

THERAP CAT: Antihistaminic.

8024. **Pyrrocaine.** *N-(2,6-Dimethylphenyl)-1-pyrrolidineacetamide; 1-pyrrolidineaceto-2',6'-xylidide;* 2-(1-pyrrolidinyl)-2',6'-acetoxylidide; 1-pyrrolidinoaceto-2,6-dimethylanilide; BN 1010; NSC-52644; Endocaine; Dynacine. $C_{14}H_{20}N_2O$; mol wt 232.32. C 72.38%, H 8.68%, N 12.06%, O 6.89%. Prepn: Schlesinger, Gordon, U.S. pat. 2,813,868 (1957 to Endo); Löfgren *et al., Acta Chem. Scand.* 11, 1724 (1957).



Crysts from hexane or petr ether + dibutyl ether, mp 83°.

Hydrochloride, $C_{14}H_{20}N_2O.HCl$, crystals from isopropanol, mp 205°. Soluble in water, alcohol, isopropyl alcohol. Practically insol in chloroform, ether.

THERAP CAT: Anesthetic (local).

8025. **1*H*-Pyrrole.** Azole; imidole; divinylenimine. C_4H_5N; mol wt 67.09. C 71.60%, H 7.51%, N 20.89%. A constituent of coal tar and bone oil: Runge, *Ann. Phys.* 31, 67 (1834). Prepd industrially by fractional distillation of bone oil, or by the thermal decompn of ammonium mucate with glycerol or mineral oil: McElvain, Bolliger, *Org. Syn. coll.* vol. I (2nd ed., 1941) p 473; Blicke, Powers, *Ind. Eng. Chem.* 19, 1334 (1927). Also formed on heating of albumin; on heating sheep's wool with aq barium hydroxide soln; by pyrolysis of gelatin. Alternate prepns from acetaldehyde and ammonia: Tschitschibabin, *Chem. Zentr.* 1916, I, 920; from succindialdehyde with ammonia and acetic acid: Harries, *Ber.* 34, 1496 (1901); 35, 1183 (1902); distilling succinimide with zinc or sodium: Bell, Bernthsen, *Ber.* 13, 877, 1049 (1880). Purification and physical properties: R. V. Hehn *et al., J. Phys. Chem.* 62, 858 (1958). *Review:* Fischer-Orth, *Die Chemie des Pyrrols* (Leipzig, 1934-1940); E. Vitcort, L. R. Anderson in Kirk-Othmer *Encyclopedia of Chemical Technology* vol. 19 (Wiley-Interscience, New York, 3rd ed., 1982) pp 499-520.

Liquid. Agreeable empyreumatic odor resembling that of chloroform. Colorless when freshly distilled, darkens unless every trace of oxygen is removed. d_4^{20} 0.9691, bp_{760} 129.8°. Best distilled *in vacuo.* n_D^{19} 1.5085. Flash pt, closed cup: 102° F (39° C). Absorption spectrum: Menczel, *Phys. Chem.* 125, 161; *Chem. Zentr.* 1927, I, 2510. Sparingly sol in water; freely sol in alcohol, benzene, ether. Insol in aq alkalies. Sol in dil acids with decompn. Solns in dil HCl yield pyrrole red, an amorphous, orange-colored substance; also polymerization takes place under the influence of acids and glycols.

8026. **Pyrrolidine.** Tetrahydropyrrole. C_4H_9N; mol wt 71.12. C 67.55%, H 12.76%, N 19.70%. Found in tobacco and carrot leaves. Probable biosynthesis from ornithine and putrescine. Usually prepd by reduction of pyrrole.

Almost colorless liquid; unpleasant ammonia-like odor. Fumes in air. bp 88.5-89°. d_4^{25} 0.8520. n_D^{25} 1.4402. Strong base. K at 25° = 1.3×10^{-3}. Miscible with water. Soluble in alcohol, ether, chloroform.

8027. **2-Pyrrolidone.** *2-Pyrrolidinone;* 2-oxopyrrolidine; α-pyrrolidone; 2-ketopyrrolidine. C_4H_7NO; mol wt 85.10. C 56.45%, H 8.29%, N 16.46%, O 18.80%. Prepd on a large scale from butyrolactone by a Reppe process: Ger. pat. 1,085,525 (to BASF). Other prepns: Metzger, Seelert, *Angew. Chem.* 75, 919 (1963); Copenhaver, Ney, U.S. pat 3,095,423 (1963 to Minnesota Mining & Manuf); Lidov, U.S. pat. 3,109,005 (1963 to Halcon International).